Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
GARMIN INTERNATIONAL, INC.	)	WT Docket No. 01-339
	)	
Amendment of Sections 95.193(a) and 95.631(d) to Authorize Manufacture, Sale and Use of GPS Transmission Enhanced Family Radio Service Units	)	RM - 10070
	)	
Amendment of Sections 95.193(a), 95.193(b), and 95.631(d) of the Commission's Rules Governing Permissible Communications in the Family Radio Service	)	

Reply Comments Filed in Response to a
Notice of Proposed Rulemaking

Filed by: Personal Radio Steering Group, Inc.
PO Box 2851
Ann Arbor, Michigan 48106
(734) 662-4533

Date: February 28, 2002

==========

TABLE OF CONTENTS

==========

I. BACKGROUND OF THE COMMENTER.

1. The Personal Radio Steering Group, Inc. (PRSG) is an all-volunteer, not-for-profit Michigan corporation established in 1980 by licensees in the General Mobile Radio Service (GMRS, FCC Part 95-A) to provide services to and to serve as an advocate for users of the FCC's personal radio services.

2. The PRSG has published more than 300 different guides to GMRS licensing, technology and operating practices in the various personal radio services. PRSG's flagship publication, the GMRS NATIONAL REPEATER GUIDE, lists the more than 3,500 GMRS repeaters, their sponsors, technical characteristics and detailed coverage information. The GUIDE has become the essential reference to this cooperative, nonprofit communications network for licensed private individuals. PRSG also works closely with major land mobile equipment manufacturers to disseminate instructional materials for radio purchasers.

3. Because frequencies authorized to the Family Radio Service (FRS, FCC Part 95-B) include some that are also allocated to the GMRS, and others that are located in between other GMRS frequencies, PRSG has a continuing interest in the growth and evolution of the FRS. We also have extensive experience in evaluating the nature of interference caused by some FRS operations both to other FRS operations and to licensed GMRS operations, especially the operation of GMRS repeater stations.

4. PRSG submitted comments to this NPRM voicing our concern about the potential for abuse of FRS, and the likelihood of interference to FRS voice communications, from the operation of devices transmitting digital signals. We are especially concerned that these devices might operate, or could be altered to operate, to engage in digital text messaging otherwise prohibited in the FRS.

II. GARMIN FAILS TO UNDERSTAND OR TO ADMIT TO THE POTENTIAL FOR SEVERE INTERFERENCE TO FRS VOICE COMMUNICATIONS.

5. At paragraph 1 of its Comments, Garmin stated:

> "Furthermore, there is no detrimental impact from the proposed operations because the technical parameters proposed will assure there is no harmful interference to other users."

The technical provisions in the NPRM contain NO requirements or restrictions that will assure such non-interference. That non-interference

would exist ONLY with the implementation of requirements such as the ones which PRSG recommended in our own Comments, including requiring pre-transmission monitoring [PRSG Comments, paragraphs 21 through 25] and increasing the length of time between permissible repeated transmissions. [PRSG Comments, paragraphs 11 through 13.] We note that the Comments of the Northern California GMRS Users Group support a requirement of pre-transmission monitoring similar to that which the PRSG also proposed.

6. Garmin's claim of non-interference seems to be based on the likelihood of interference from a single GPS-based digital transmission, and fails to account for the cumulative effect of dozens, or perhaps even hundreds, of such digital transmissions occurring in the same general area, such as at a popular amusement center or other recreational area.

III. PRSG AGREES THAT MANUAL ACTIVATION SHOULD NOT BE LIMITED TO PRESSING A KEY.

7. At paragraph 3 of its Comments, Garmin states

> "... the term `manual key press' as used in paragraph 95.193(b) of the proposed rule modifications is unnecessarily restrictive."

PRSG agrees that this may be unnecessarily restrictive language. However, we also wish to point out the problems increasingly encountered at cellular 911 response centers around the country, which are receiving 911 calls that have been initiated accidentally or unintentionally because the "emergency call buttons" are too easily if inadvertently depressed.

8. PRSG requests that the design of whatever mechanisms (such as depressing a button, rotating a knob, etc.) or procedures (such as a voice command) are used to initiate a data transmission in a GPS-equipped FRS unit must assure the least possible accidental or inadvertent activation. This might be through a requirement for verification, for instance a second or a different button press or voice command within a certain short period of time. There are relatively simple, ergonomically designed solutions, including recessing buttons or requiring a specific sequence of manual commands or button pressing within a short period of time, in order to activate the transmitter for data communications.

IV. GARMIN FAILS TO UNDERSTAND THE LACK OF "SECURITY" IN FRS TRANSMISSIONS.

9. A combination of 14 channels and 38 (or so) CTCSS codes is insufficient to provide any meaningful "security." At crowded amusement parks or popular recreational centers, actual operator experience is that it is often difficult to find an unused channel-plus-code combination.

10. Further, some "scanning" models of FRS radios will display both the channel AND THE CTCSS CODE of any received signal. No security here! Perhaps Garmin has fallen victim to the common marketing misrepresentation that the use of CTCSS or DCS codes provides some degree of "security" or "privacy."

11. Garmin again repeats its earlier request that GPS-enhanced FRS units be capable of responding to remote query (polling), at least to/from other members of his or her "calling group." [Garmin Comments at paragraph 4.] Garmin provides no further indication of how such "calling groups" can be distinguished from one another, or what privacy or security is assured other than merely the combination of the limited number of channel-plus-code combinations. [Garmin Comments at paragraph 5.]

12. PRSG voices its continuing opposition [see PRSG Comments at paragraphs 18 through 20] to any "remote polling" capability, but especially in the absence of provisions for pre-transmission monitoring.

13. Garmin suggests [Comments at paragraph 5] that some kind of "unit/user I.D." will also provide some kind of security. However Garmin fails to provide any protocol for establishing such a "calling group." This need not be a specific technology or protocol, just some kind of transmitter identification that can uniquely distinguish one unit from another.

V. PRSG CONTINUES OUR OPPOSITION TO PERMITTING ANY USER-GENERATED TEXT IN THE DIGITAL TRANSMISSION.

14. PRSG [Comments at paragraphs 29 through 31) discussed the need to restrict digital communications solely to GPS-derived location information. We specifically recommended that any form of user-generated text messaging be prevented by the hardware. FRS must not be allowed to become a Short Message Service (SMS) service.

15. To accomplish this and yet to provide for a capability of distinguishing between the signals of multiple units, we recommended the inclusion of a manufacturer pre-set identification code. A particular GPS-capable FRS unit could be user programmed to recognize only certain such automatically identified signals.

16. In its "Rino Screen Examples" page on the Internet (accessible at http://www.garmin.com/products/rino/screen.html), Garmin shows others' location designated by title or name (Camp, Pat, Cato, Fish, Cabin, Jack, Joe, etc.) but gives no indication as to how these names or titles would be derived. It is unnecessary for the other transmitting unit(s) to include any such text string in their respective digital emissions. The recipient's own GPS-enable FRS receiver could contain all necessary information to assign a title or name, based or interpretation of the received, automatically generated, manufacturer pre-set code.

17. To avoid GPS-equipped FRS units from being used for Short Message System (SMS) use, the FCC must explicitly prohibit the transmission of any user-selectable text or code.

VI. GARMIN'S INTENT FOR USE OF GMRS IS UNCLEAR.

18. In calculating the number of channel-plus-CTCSS-code combinations [see Garmin Comments at paragraph 5], Garmin assumed a maximum of 14

channels. In the product description on its Web site (http://www.garmin.com/products/rino/), Garmin also states

> "What really separates the Rino from the rest of the FRS herd is the ability to `beam' your exact location to another Rino user within a two-mile range using the FRS spectrum."

These statements suggest that Garmin recognizes the digital communications of ANY kind, whether derived from GPS data or from elsewhere, are prohibited under the GMRS rules. [47 CFR 95.631]

19. However, at other locations, Garmin refers to "GPS-Integrated FRS/GMRS Radios." From the Garmin Web site (http://www.garmin.com/products/rino/):

> "These GPS devices integrate radio functionality to provide two-wy communications up to two miles using FRS frequencies and up to five miles using GMRS channels."

20. This language suggests two things:

1) That Garmin has bought into the popular misrepresentation that FRS radios can actually communicate two miles. (Actual field experience is that such two-mile range is rarely achievable except under the most ideal of conditions. The FCC envisioned FRS covering only "a few city blocks" [NPRM, FCC Docket WT 95-102, paragraph 7].)

2) That the GPS-data-transmitting capability will also be available on the GMRS-only channels.

21. To clarify the situation regarding data transmissions on the GMRS-only channels of the two Garmin "Rino" models, PRSG wrote to Garmin and received the following reply by E-mail from Brad Dameron, Product Support Specialist, Garmin International (Olathe, KS):

> "Both FRS and GMRS (license required) will allow for the transmission of position with a simple button press. This will allow the user to transmit a known GPS location to the receiving radio, allowing other [sic] to navigate to their position."

22. Thus there is confusion as to exactly what will be the data communications capabilities of the Garmin units. The FCC did not propose to permit data communications by any GMRS unit. If Garmin intends to manufacture such units, they will not be legal for sale in this country.

23. Expansion of data communications to GMRS raises a host of additional problems, including FCC callsign identification requirements and other problems, not included in the present NPRM considerations.

VII. PRSG SUPPORTS THE RECOMMENDATIONS OF THE NORTHERN CALIFORNIA GMRS USERS GROUP.

24. In its comments, the Northern California GMRS Users Group (NCGUG) made several constructive proposals for changes in the rules to allow for GPS-based FRS data communications.

25. With regard to the NCGUG comment (at paragraph 24), which concerns devices attached to FRS units, we have consistently opposed all use of such outboard or after-market devices in FRS. We must note that the provisions of FRS Rule 4 (94.194) notwithstanding, some FRS users DO attach other apparatus to FRS units, devices that have NOT been FCC certified as part of that FRS unit.

26. The FRS rules enabling limited digital communications must therefore prohibit any external connection through which the basic operation of that FRS transmitter could be modified. We note from Garmin's Web site (http://www.garmin.com/products/rino/spec.html) that it intends to provide such a port for a "PC interface cable" on its Rino model 120. Although such a port may be necessary for updating mapping information, the FRS rules must specifically prohibit any capability of using data transferred through that port to change the basic transmitter capabilities (timing, data content, etc.) of that unit.

27. NCGUG's comments concerning remote polling of multiple units (at paragraphs 27 through 29) reflects a very real concern of PRSG that GPS-enable FRS units could come into use in an industrial environment with dozens, perhaps even hundreds or even thousands of such units employed as a lower-cost alternative to other AVI (automatic vehicle identification or AVM (automatic vehicle monitoring) equipment, for which the Commission has made ample provisions elsewhere, in Part 90 of the FCC Rules.

VIII. GARMIN HAS FAILED TO POST THE FCC-REQUIRED LANGUAGE ON ITS WEB SITE.

28. FCC Rules (47 CFR 2.803(c)) require that specific language be included in any "advertisement" of a product prior to a determination of its compliance with the applicable technical requirements. Garmin's "Sneak Peek Specifications" (http://www.garmin.com/products/rino/) may constitute that kind of advertisement, but the required language is not present on Garmin's Web site.

IX. OTHER PROCEDURAL MATTERS.

29. PRSG authorizes parties submitting additional information about these REPLY COMMENTS, to submit them to us by E-mail at: prsg@provide.net

30. However, all other requirements of the applicable FCC Regulations (including full personal identification and an accurate current mailing address) must still be provided.

Comments filed by: Corwin D. Moore, Jr.
Administrative Coordinator

Personal Radio Steering Group Inc.
PO Box 2851
Ann Arbor, MI 48106
February 28, 2002

==========

CERTIFICATION OF SERVICE

I, Corwin D. Moore Jr., certify that a copy of these COMMENTS will be sent on March 1, 2002, to the following parties:

Henry M. Rivera; Larry S. Solomon
Shook, Hardy & Bacon, LLP
Suite 800
600 14th Street, NW
Washington, DC 20005

Northern California GMRS Users Group
Gregory J. Forrest, P.E.
1777 Oakland Blvd., Suite 101
Walnut Creek, CA 94596

•